

CLAIMS

What is claimed is:

1. A composite article comprising:
a pre-preg material comprising a reinforcement impregnated with a thermosetting resin, the composite article having a specific density ranging from approximately 1.00 g/ml to approximately 1.15 g/ml.
2. The composite article of claim 1, wherein the thermosetting resin comprises a carbon phenolic resin.
3. The composite article of claim 1, wherein the thermosetting resin comprises a phenolic resin or an epoxy resin.
4. The composite article of claim 1, wherein the reinforcement comprises glass fibers, boron filaments, boron nitride, silicon carbide, graphite (carbon) filaments, or high modulus organic filaments.
5. The composite article of claim 4, wherein the high modulus organic filaments comprise poly(benzothiazoles) or poly(aromatic amides).
6. The composite article of claim 1, wherein the reinforcement comprises organic filaments of nylon, polyethylene, or aramid.
7. The composite article of claim 1, wherein the pre-preg material further comprises a filler material.
8. The composite article of claim 7, wherein the filler material comprises silica, carbon powder, powdered alumina trihydrate, or antimony oxide.

9. The composite article of claim 1, wherein the composite article comprises a rocket nozzle component.

10. The composite article of claim 1, wherein the composite article comprises a composite panel.

11. The composite article of claim 1, wherein the composite article has an across-ply tensile strength of about 1800 psig to about 3000 psig.

12. The composite article of claim 1, wherein the composite article has an across-ply tensile strength of about 1800 psig to about 2200 psig.